

ATP III Guidelines

Goals and Treatment Overview

Primary Prevention With LDL-Lowering Therapy

Public Health Approach

- Reduced intakes of saturated fat and cholesterol
- Increased physical activity
- Weight control

Primary Prevention

Goals of Therapy

- Long-term prevention (>10 years)
- Short-term prevention (≤ 10 years)

Causes of Secondary Dyslipidemia

- Diabetes
- Hypothyroidism
- Obstructive liver disease
- Chronic renal failure
- Drugs that raise LDL cholesterol and lower HDL cholesterol (progestins, anabolic steroids, and corticosteroids)

Secondary Prevention With LDL-Lowering Therapy

- Benefits: reduction in total mortality, coronary mortality, major coronary events, coronary procedures, and stroke
- LDL cholesterol goal: <100 mg/dL
- Includes CHD risk equivalents
- Consider initiation of therapy during hospitalization (if LDL ≥ 100 mg/dL)

LDL Cholesterol Goals and Cutpoints for Therapeutic Lifestyle Changes (TLC) and Drug Therapy in Different Risk Categories

Risk Category	LDL Goal (mg/dL)	LDL Level at Which to Initiate Therapeutic Lifestyle Changes (TLC) (mg/dL)	LDL Level at Which to Consider Drug Therapy (mg/dL)
CHD or CHD Risk Equivalents (10-year risk >20%)	<100	≈100	≈130 (100–129: drug optional)
2+ Risk Factors (10-year risk ≥20%)	<130	≈130	10-year risk 10–20%: ≈130
			10-year risk <10%: ≈160
0–1 Risk Factor	<160	≈160	≈190 (160–189: LDL-lowering drug optional)

LDL Cholesterol Goal and Cutpoints for Therapeutic Lifestyle Changes (TLC) and Drug Therapy in Patients with CHD and CHD Risk Equivalents (10-Year Risk >20%)

LDL Goal	LDL Level at Which to Initiate Therapeutic Lifestyle Changes (TLC)	LDL Level at Which to Consider Drug Therapy
<100 mg/dL	≈100 mg/dL	≈130 mg/dL (100–129 mg/dL: drug optional)

LDL Cholesterol Goal and Cutpoints for Therapeutic Lifestyle Changes (TLC) and Drug Therapy in Patients with Multiple Risk Factors (10-Year Risk \geq 20%)

LDL Goal	LDL Level at Which to Initiate Therapeutic Lifestyle Changes (TLC)	LDL Level at Which to Consider Drug Therapy
<130 mg/dL	≥ 130 mg/dL	10-year risk 10–20%: ≥ 130 mg/dL
		10-year risk $<10\%$: ≥ 160 mg/dL

LDL Cholesterol Goal and Cutpoints for Therapeutic Lifestyle Changes (TLC) and Drug Therapy in Patients with 0–1 Risk Factor

LDL Goal	LDL Level at Which to Initiate Therapeutic Lifestyle Changes (TLC)	LDL Level at Which to Consider Drug Therapy
<160 mg/dL	≈160 mg/dL	≈190 mg/dL (160–189 mg/dL: LDL-lowering drug optional)

LDL-Lowering Therapy in Patients With CHD and CHD Risk Equivalents

Baseline LDL Cholesterol: ³130 mg/dL

- Intensive lifestyle therapies
- Maximal control of other risk factors
- Consider starting LDL-lowering drugs simultaneously with lifestyle therapies

LDL-Lowering Therapy in Patients With CHD and CHD Risk Equivalents

Baseline (or On-Treatment) LDL-C: 100–129 mg/dL

Therapeutic Options:

- LDL-lowering therapy
 - Initiate or intensify lifestyle therapies
 - Initiate or intensify LDL-lowering drugs
- Treatment of metabolic syndrome
 - Emphasize weight reduction and increased physical activity
- Drug therapy for other lipid risk factors
 - For high triglycerides/low HDL cholesterol
 - Fibrates or nicotinic acid

LDL-Lowering Therapy in Patients With CHD and CHD Risk Equivalents

Baseline LDL-C: <100 mg/dL

- Further LDL lowering not required
- Therapeutic Lifestyle Changes (TLC) recommended
- Consider treatment of other lipid risk factors
 - Elevated triglycerides
 - Low HDL cholesterol
- Ongoing clinical trials are assessing benefit of further LDL lowering

LDL-Lowering Therapy in Patients With Multiple (2+) Risk Factors and 10-Year Risk $\geq 20\%$

10-Year Risk 10–20%

- LDL-cholesterol goal < 130 mg/dL
- Aim: reduce both short-term and long-term risk
- Immediate initiation of Therapeutic Lifestyle Changes (TLC) if LDL-C is ≥ 130 mg/dL
- Consider drug therapy if LDL-C is ≥ 130 mg/dL after 3 months of lifestyle therapies

LDL-Lowering Therapy in Patients With Multiple (2+) Risk Factors and 10-Year Risk $\geq 20\%$

10-Year Risk $< 10\%$

- LDL-cholesterol goal: < 130 mg/dL
- Therapeutic aim: reduce long-term risk
- Initiate therapeutic lifestyle changes if LDL-C is ≥ 130 mg/dL
- Consider drug therapy if LDL-C is ≥ 160 mg/dL after 3 months of lifestyle therapies

LDL-Lowering Therapy in Patients With 0–1 Risk Factor

- Most persons have 10-year risk <10%
- Therapeutic goal: reduce long-term risk
- LDL-cholesterol goal: <160 mg/dL
- Initiate therapeutic lifestyle changes if LDL-C is ≥ 160 mg/dL
- If LDL-C is ≥ 190 mg/dL after 3 months of lifestyle therapies, consider drug therapy
- If LDL-C is 160–189 mg/dL after 3 months of lifestyle therapies, drug therapy is optional

LDL-Lowering Therapy in Patients With 0–1 Risk Factor and LDL-Cholesterol 160-189 mg/dL (after lifestyle therapies)

Factors Favoring Drug Therapy

- Severe single risk factor
- Multiple life-habit risk factors and emerging risk factors (if measured)

Benefit Beyond LDL Lowering: The Metabolic Syndrome as a Secondary Target of Therapy

General Features of the Metabolic Syndrome

- Abdominal obesity
- Atherogenic dyslipidemia
 - Elevated triglycerides
 - Small LDL particles
 - Low HDL cholesterol
- Raised blood pressure
- Insulin resistance (\pm glucose intolerance)
- Prothrombotic state
- Proinflammatory state